

ABSTRACT

A transistor for active matrix display and a method for producing the transistor (1). The transistor (1) includes a microcrystalline silicon film (5) and an insulator (3). The crystalline fraction of the microcrystalline silicon film (5) is above 80%. According to the invention, the transistor (1) includes a plasma treated interface (4) located between the insulator (3) and the microcrystalline silicon film (5) so that the transistor (1) has a linear mobility equal or superior to 1.5 cm²V⁻¹s⁻¹, shows threshold voltage stability and wherein the microcrystalline silicon film (5) includes grains (6) whose size ranges between 10 nm and 400 nm. The invention concerns as well a display unit having a line-column matrix of pixels that are actively addressed, each pixel comprising at least a transistor as described above.